Commonwealth of Kentucky
Division for Air Quality

RESPONSE TO COMMENTS

ON THE TITLE V / SYNTHETIC MINOR DRAFT PERMIT V-06-028
CARPENTER CO.
200 FOREST PARK DRIVE
RUSSELLVILLE KY.
OCTOBER 26, 2006
MARK LABHART, REVIEWER

SOURCE ID:	021-141-00012
SOURCE A.I. #:	2751
ACTIVITY ID:	APE20050001

SOURCE DESCRIPTION:

Carpenter Co. makes flexible polyurethane foam and other comfort cushioning products. The main operation is slabstock foam production where the foam is produced in large "buns" which can be cut to make different products. Slabstock trim scrap is ground into small pieces that are bonded together in rebond production. Foam fabrication is another process taking place at Carpenter. In the fabrication process foam pieces are glued to backing materials or glued to each other to make intricate shapes. Emissions from the fabrication process are from the adhesives used to bond the pieces together rather than the foam itself.

Carpenter also produces cushioning products using adhesive bonded and thermally bonded polyester fibers. VOC and HAP are emitted from the adhesives, but the thermal bonding process has negligible emissions. Remaining equipment and operations at Carpenter are support for the previously described operations, i.e. facility boilers, bulk material handling equipment, railcar unloading, etc.

PUBLIC AND U.S. EPA REVIEW:

On September 22, 2006, the public notice on availability of the draft permit and supporting material for comments by persons affected by the plant was published in the *News Democrat & Leader* in Russellville, Kentucky. The public comment period expired 30 days from the date of publication.

Comments were received from Carpenter Co. on October 2, 2006. Attachment A to this document lists the comments received and the Division's response to each comment. Minor changes were made to the permit as a result of the comments received, however, in no case were any emissions standards, or any monitoring, recordkeeping or reporting requirements relaxed. A detailed explanation of the changes made to the permit follows. The U.S. EPA has 45 days to comment on this proposed permit.

Response to Comments

Comments on the Draft Title V Air Quality Permit were submitted by L. Wade Baker, Environmental Manager of Carpenter Co..

General

1. Please change all references to "Carpenter Company" to "Carpenter Co." This is the legal name of our company.

Division's response: Comment acknowledged, changes made.

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2. We have had several discussions concerning the "carbon adsorption system" for our toluene Diisocyanate (TDI) storage system. All references to this adsorption system need to be removed from the permit. I have attached a copy of the Tanks 4.0 program showing the annual emissions from the storage tanks. As you can see on page 16 of 16, the total uncontrolled annual emissions are 1.94 lbs/yr. This number includes breathing losses, which are neglible as our tanks are located indoors. We are prepared to accept these emissions, make no claims for emission control for the carbon drums, and maintain the drums for personnel comfort and odor control as a best management practice. All references to these drums as an adsorption system should be removed from the permit.

Division's response: Comment acknowledged, changes made. Based on the predicted emissions from the storage tanks it was agreed that this requirement posed a fairly significant burden on the company with minimal environmental benefits. In addition, the carbon drums are located inside of the plant and there are OSHA standards governing TDI concentration in the plant air. Therefore the Division has concluded that additional monitoring of these emission sources beyond that already required for worker health and safety is unnecessary. Removed from Section B, p.7, Operating Limitation 1.A; p.8, Specific Monitoring Requirements 4.A; p.10, Specific Recordkeeping Requirements 5.A; p.11, Specific Reporting Requirements 6.A(1).

3. The written leak detection program for the TDI system needs to be changed to an AVO program only. We are regulated under the EPA Risk Management Program and OSHA worker protection requirements that require us to watch for leaks in the system. Should a leak occur, the OSHA exposure limit would mandate repair. Also, TDI is a very low pressure material. Any leaks would be liquid leaks and detectable by visual means. TDI is also very water reactive with a very high freezing temperature. Should a leak develop and there be any amount of moisture in the atmosphere, the material would quickly react with that moisture and form urea thus sealing the leak. Also, should a leak develop and the ambient temperature is below 58° F, the material will begin to freeze, thus sealing the leak. The written requirement you have placed in the permit are burdensome and seem unnecessary given the low emissions and low risk of release.

Division's response: Comment acknowledged, no change made. The draft permit contains the language to allow Carpenter Co. to tailor the leak detection program to address the concerns above.

Section B, p.8, 1.C;

C. Other components in diisocyanate service. If evidence of a leak is found by visual, audible, or any other detection method, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in paragraph (D) of this section. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

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This paragraph makes reference to AVO methods [Audible, Visual, or any other (Olfactory)] that the permittee has proposed with this comment.

Section B, p.9, 4.B(3);

B. The permittee shall prepare and maintain a written leak inspection and maintenance plan to be implemented within 60 days of issuance of this permit that specifies:

(3) A systematic procedure for identifying leaks for all equipment in diisocyanate service;

This paragraph allows the permittee to select a "systematic procedure" without specifying what that procedure should be.

Section B, p.9, 4.B(7);

(7) To satisfy the requirements to provide a leak inspection and maintenance plan, the permittee may use applicable standard operating procedure (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans, provided the alternative plans meet the requirements of this section.

This paragraph allows the permittee to use existing procedures from other agencies to meet the requirements of the Leak Inspection and Maintenance Plan.

After further discussion with the facility about the Division's intent for the program it was determined that the facility burden was minimal.

The following comments were included within the body of the permit.

4. In the permit descriptions for EP01 and EP02 on page 2, EP03 on page 4, and the Group Requirements for Components in Diisocyanate Service on page 7, a "Carbon adsorption system for diisocyanate storage vessels" was listed under the subheading Control Equipment. Carpenter Co added the following comment to the draft permit:

   Note: Please refer to the Tanks 4.0 information. We will accept the uncontrolled emissions from the tanks. The Carbon Absorption system is not and has never been considered as an instrument of emission reduction. They are in place for personnel comfort and odor control. Remove this statement.

Division's response: With the removal of the monitoring and reporting requirements for the carbon system as discussed in Item #2 above it was determined that this descriptor was not necessary or appropriate. Reference to a control device for the diisocyanate storage vessels was removed from the emission point descriptions.

5. Page 5, Rebond Foam Production Line, Specific Monitoring Requirements 4.A, requires a qualitative visual inspection for emissions from the Surge Bin Cyclone, Holding Bin Cyclone and associated pneumatic conveying ducts, at least once per operating month.

   Note: With only three possible points of emission to outside air, and no visible evidence of particulate matter from those points, the monthly observations are requested to be changed to quarterly observations.

Division's response: No changes made. See response to comment #6 below.

6. Page 6, Rebond Foam Production Line, Specific Recordkeeping Requirements 5.C(3) requires keeping records of Method 9 opacity readings as necessary. Carpenter Co added the following:

Response to Comments

Note: Please add, if a Method 9 observer is not available, then Method 22 is acceptable.

Division's response, #5 and #6: The monthly "qualitative visual inspection" required by the draft permit is similar to Method 22 in that a determination of opacity levels is not required, and observer certification according to the procedures of Method 9 is not required. The monthly visual inspection serves simply as an indicator of the presence of emissions. Normal operations are not expected to produce any visible emissions. It is the presence of visible emissions that triggers either inspection and repair of the equipment or Method 9 observations as the permittee determines appropriate. Following further discussion with the source about these requirements, Carpenter Co withdrew their concerns. No changes were made to the permit.

7. Page 7, Group Requirements for Components in Diisocyanate Service, Operating Limitations 1.B(2)(iii)(a and b) require first attempts at repair of a leaking transfer pump to be made with 5 days following detection of a leak and final repairs to be completed within 15 days. Page 8, Group Requirements for Components in Diisocyanate Service, Operating Limitations C, requires that other leak components in diisocyanate service be repaired according to the same schedule, 5 and 15 days respectively. Carpenter Co. requested that these time frames be changed to 10 days for the first attempt at repair and 20 days for the final repair to be completed.

Division's response: Carpenter has asserted that they do not keep spare pumps or replacement components in stock, and that the delivery of spares may take several days, so the timeframes listed in the draft permit should be extended. As these time frames were somewhat arbitrary to begin with, the timeframes for repair have been extended to 10 days for a first attempt at repair and 20 for the final repair. This change was also incorporated on Page 11, Group Requirements for Components in Diisocyanate Service, Specific Recordkeeping Requirements, 5.B(6) and (7).

8. Page 15, Description, EP07 and EP08, the draft permit lists specific models of Graco spray guns used as descriptors for these emission points. Carpenter Co. requested the phrase "or equivalent unit" be added to the emission point descriptions.

Division's response: The manufacturer and model numbers of the spray guns are not as important as the maximum continuous ratings for adhesive usage also given in the permit descriptions. The Division discussed the relationship of the PTE to the maximum continuous rating of the spray guns with Carpenter Co. The facility is aware of the effect of capacity of these spray guns on the PTE, but their concern is being confined to a specific manufacturer and model spray gun based on the permit description. Based on this discussion the Division has revised the descriptions to read as follows:

EP07 (EU07) Foam Fabrication - Spray Glue Gun Operation
Description: (30) Spray Guns; Graco - 230-56X198A or equivalent

EP08 (EU08) Slab Bonding - Spray Glue Gun Operation
Description: (8) Spray Guns; Graco - Optimizer M-1265 HVLP or equivalent

9. Page 19, Section C – Insignificant Activities, the word 'Polyol' was added in the description of East Side Tank #1 and East Side Tank #2, (items #9 and #10).

Response to Comments

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.